



**UNITED STATES DEPARTMENT OF COMMERCE  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
097139,236	03/25/99	CHITOMO	7934-151

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MM71/0422

EXAMINER
VIRMANI, S

ART UNIT	PAPER NUMBER
2032	

DATE MAILED: 04/22/99

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
09/139,296

Applicant(s)  
Ohtomo et al

Examiner  
Mr. Shival P. Virmani

Group Art Unit  
2852



☐ Responsive to communication(s) filed on \_\_\_\_\_.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 28-31 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 28-31 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☒ received in Application No. (Series Code/Serial Number) 08/935,445.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

2. Claims 28-31 are all rejected under 35 USC § 102(e) as being anticipated by Ohtomo et al (5, 850, 280). Regarding these claims, Ohtomo et al discloses a lithographic device comprising a substrate stage (20 and 21) which can be positioned by a first positioning device (25 or 27) parallel to a y-direction (stage 21) which is perpendicular to a vertical z-direction and an x-direction which is perpendicular to the y and z directions (stage 20), an imaging system (1-4) with a main axis parallel to the z-direction, a mask stage (8 and 9) which can be positioned parallel to the y-direction (see col. 6, lines 37-42) by a second positioning device (linear motor) and an illumination optical system (14) which irradiates an exposure illumination light beam. Further, Ohtomo et al discloses that the mask stage (8 and 9) is positionable parallel to the x-direction (col. 6, lines 37-41) and rotatable about an axis of rotation (theta) which is parallel to the z-direction (see col. 7, lines 38-42) by the second positioning device (note: the actuators, which move the mask stage in both the x and y directions also move said stage relative to the axis of rotation--the axis parallel to the z-direction; again, please see col. 7, lines 15-42). Finally,

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Ohtomo et al teaches that the second positioning device is provided with a first linear motor (31A or 31B) by which the mask stage can be positioned over comparatively small movement parallel to the x and y directions (note: a small or heavy thrust can be used depending on the desired movement; see col. 7, lines 50-59) and can be rotated about the axis of rotation of the mask stage (see above) and a second linear motor (31B) which can position the mask stage over comparatively greater distances parallel to the y-direction (see col. 9, lines 48-50, where the actuators associated with the x-direction movement have a smaller thrust force than those actuators used for y-direction movement).

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Shival P. Virmani whose telephone number is (703) 308-1050.

S.V.

April 19, 1999

*R. L. Moses*

**Richard Moses**  
**Primary Examiner**